MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2016/2017

DMM5018 – INTRODUCTION TO MULTIMEDIA

(For Diploma Students Only)

11 MARCH 2017
2:30 p.m – 4:30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **7** pages with **3** sections.
2. Answer **ALL** questions.
3. For **Section A**, please shade your answers on the **OMR sheet** provided.
4. For **Section B** and **C**, please write your answers in the **Answer Booklet** provided.

Section A: Mutiple Choice Questions (Total: 20 Marks)
Instruction: *Please shade the correct answer on the* ***OMR sheet*** *provided.*

1. Multimedia becomes _____ multimedia when a user is given the option of controlling the elements.
   A. interactive
   B. active
   C. linear
   D. electronic

2. Which of the following statements is **FALSE** about applications of multimedia?
   A. Multimedia is a very effective presentation and sales tools that increases viewers' retention rates.
   B. Multimedia can be applied in educational software to enrich the learning process in schools.
   C. Multimedia is available at shopping mall to provide information and help to shoppers.
   D. Multimedia is hardly applied in distance learning due to its expensive development effort and large amounts of digital memory required.

3. Which of the following is **NOT** considered as intangible assets in multimedia?
   A. Cost
   B. Creativity
   C. Organisation
   D. Communication

4. _____ was introduced by Apple in the 1980s and it provides a single plug-and-socket connection up to 63 devices.
   A. IDE
   B. USB
   C. FireWire
   D. SATA cable

5. Which of the following features are to be considered when choosing an authoring tool that best fits the multimedia project development?
   I. Editing and organising features
   II. Programming features
   III. Delivery, cross-platform and Internet playability features
   IV. Auto-generate image features

   A. I, II and III
   B. I, II and IV
   C. I, III and IV
   D. II, III, and IV

6. The following are the characteristics of a bitmapped font, **EXCEPT**:
   A. File size increases as more sizes are added.
   B. Require a lot of memory.
   C. Non-scalable.
   D. Faster loading speed.

7. A _____ is a type of text which contains a link to enable the user to navigate a system through text in a nonlinear way.
   A. font
   B. hypertext
   C. icon
   D. node

Continued...

8. How can a bitmap image be created?
   I. Captured by using a camera.
   II. Grab a bitmap from an active computer screen with a screen capture program, then paste it into a paint program.
   III. Captured from a photo or other artwork using a scanner to digitise the image.
   IV. Created from Computer-aided design (CAD) programs by architects and engineers.

   A. I, II and III
   B. I, II and IV
   C. II, III and IV
   D. All of the above

9.
- Commonly used standard method of compression for photographic images.
- Support a maximum of 16.7 million colors.
- No transparency and animation.

The characteristics describe above are inherent in which of the image file types below?

A. PNG
B. GIF
C. PICT
D. JPEG

10. When designing a multimedia project, the developer should avoid the following graphical approaches, **EXCEPT**:
   A. Clashes of color.
   B. Too many substantive elements presented too quickly.
   C. Using a picture with a lot of contrast in color.
   D. Plenty of white space in the screen.

11. _____ is linked to navigation maps during the design process and helps to visualize the information architecture. It is organised sequentially and each screen is sketched out with design notes and specifications before rendering.
   A. Images
   B. Storyboard
   C. Graphic board
   D. Interfaces

12. The phenomenon when an object seen by the human eye remains chemically mapped on the eye's retina for a brief time after viewing is called _____.
   A. phi
   B. vision memory
   C. persistence of vision
   D. cel vision

13. _____ is an effect in which a still or moving image is transformed into another.
   A. Distortion
   B. Transformation
   C. Warping
   D. Morphing

Continued...

14. _____ refers to audio quality based on quality of recording but not the device which is used to play the audio.
A. Device dependent
B. Device independent
C. Device balancing
D. Device recording

15. In digital audio, each sample is rounded off to the nearest integer, and this process is called _____.
A. quantisation
B. conversion
C. nearest point
D. integer numbering

16. Which of the following statements are about digital audio?
I. Analogous to bitmapped images.
II. Easy play back spoken dialog.
III. Provides consistent playback quality.
IV. Does not require knowledge of music theory

A. I, II and III
B. I, II and IV
C. II, III and IV
D. All of the above

17. Which of the following statements is **NOT TRUE** about video?
A. Digital video method is used for making and delivering video for multimedia.
B. There are many sources for digital video but getting the rights can be difficult, time-consuming, and expensive.
C. The more separation of the color information between the components, the lower the quality of the image created for a video.
D. Digital video consists of a format for encoding and playing back video files by a computer.

18. The file size and the quality of digital video are dependent on which characteristics?
I. Frame rate
II. Frame size
III. Color resolution
IV. Audio settings

A. I, II and III
B. I, II and IV
C. II, III and IV
D. All of the above

19. Most web browsers allow embedding of sounds into documents using the _____ tag.
A. `<sound>`
B. `<audio>`
C. `<a>`
D. `<img>`

20. Which of the following statements is **NOT TRUE** about using font for the web?
A. Use fonts that are available on multiple platforms.
B. Use CSS to specify alternative fonts.
C. Use only San Serif font type in all web projects.
D. It is possible to use a font that is hosted in the cloud.

Continued...

Section B: Fill in the blanks (Total: 20 Marks)

Instruction: *Read each statement or question below carefully and fill in the blanks with the correct answer. Answer* ***ALL*** *the questions in the* ***Answer Booklet*** *provided.*

Font	Illusion	Codecs	Royalty-Free
Right-managed	Intellectual property	Chroma Keying	Multimedia Designers
Multimedia programmers	HTTP	CD-ROM	Optical Character Recognition
Tweening	Trimming	Antialiasing	Audio resolution
Texture	Interactivity	Plugin	Object
TCP	Time stretching	Morphing	Project Plan

1. Multimedia is a combination of text, audio, images, animation, video and _____.

2. _____ is the most cost effective distribution medium for multimedia projects which contains up to 80 minutes of audio or software data whose memory is read only.

3. _____ are responsible to integrate all elements of a multimedia project using an authoring system or programming language.

4. Authoring tools generally treat multimedia elements as _____ and it is assigned with properties or modifiers.

5. _____ device enables you to convert different types of printed matters into ASCII text files.

6. A _____ is a collection of characters of a single size and style belonging to a particular typeface family.

7. _____ refers to the smoothing of jagged edges of drawn graphics and text to improve their appearance or readability.

8. _____ refers to the properties held and sensations caused by the external surface of objects received through the sense of touch.

9. _____ images are purchased and then can be used without paying additional license fees.

10. In the development or production phase, the _____ becomes the systematic instruction manual for building the project.

11. Insert a copyright statement in the project that legally designates the code as the creator's _____.

Continued...

12. Animation starts with independent pictures and puts them together to form the _____ of continuous motion.

13. _____ depicts the action that takes place between keyframes.

14. _____ can alter the length of a sound file without changing its pitch.

15. _____ determines the accuracy with which sound can be digitised.

16. _____ can be used to remove blank space from front of the recording and any unnecessary extra time of the end.

17. _____ is a special effect to superimpose subjects over different backgrounds.

18. _____ is the algorithm used to compress a video in real time for fast playback.

19. _____ provides rules for a simple transaction between two computers on the Internet.

20. From time-to-time, you may need to install a new _____ for browsers to play a multimedia object.

Section C: Structured Questions, 3 Questions (Total: 60 Marks)
Instruction: *Answer **ALL** the questions in the **Answer Booklet** provided.*

QUESTION 1 **[20 Marks]**

a. Differentiate between Alpha testing and Beta testing in multimedia development process. (4 Marks)

b. List and explain **THREE (3)** types of authoring tools in multimedia development. (6 Marks)

c. Differentiate between Serif and Sans Serif fonts. (4 Marks)

Continued...

d. Figure 1 shows a Times New Roman font labelled with font terminologies. Identify the font terminologies of x, y and z labelled in the figure. (3 Marks)

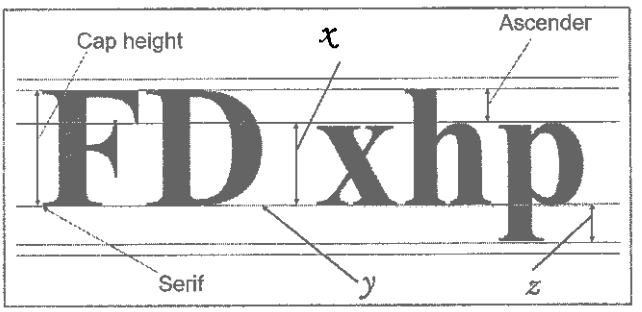

Figure 1

e. Define the following terms:

i. Button (1 Mark)

ii. Font rasterisation (1 Mark)

iii. HTML (1 Mark)

QUESTION 2 **[20 Marks]**

a. Differentiate between bitmap graphics and vector graphics. Give **ONE (1)** advantage and **ONE (1)** disadvantage of bitmap graphic. (4 Marks)

b. Define lossless compression and lossy compression techniques. (4 Marks)

c. The four fundamental organising structures are linear, nonlinear, hierarchical, and composite. Explain each one. (4 Marks)

d. List out **TWO (2)** basic ways of how the developer should work with clients during product development phase. (4 Marks)

e. Differentiate between 2D and 2.5D space animation. (4 Marks)

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QUESTION 3

[20 Marks]

a. Define Musical Instrument Digital Interface (MIDI) and explain **TWO (2)** advantages of using it. (4 Marks)

b. Based on the information given as below, calculate the video file size in Kilobyte (KB). *Round off your answer to one decimal place.* (6 Marks)

Duration	Frame Rate	Frame size	Color depth	Sampling rate	Sound Resolution	Channel
2 minutes	15	400 by 250	24 bits	22.1 KHz	1 bytes	Mono

c. Differentiate between analog and digital video. (4 Marks)

d. Low-bandwidth connections can be a bottleneck for sending multimedia across the Internet. Provide **THREE (3)** solutions to solve the bandwidth bottlenecks. (6 Marks)

End of Page.